

### **ABSTRACT OF THE DISCLOSURE**

The new reactor is used for the production of special grades of carbon black hitherto not designated by ASTM. The reactor is characterized by creating a vortex through separate injection inlets rather than confining walls used in the prior art to create a vortex. Carbon black produced by this reactor is characterized by high structure or low structure with low surface area. A process for the manufacture of carbon black using the new reactor is also disclosed.